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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,017	09/11/2003	Tetsuji Kotera	BW-DKT03039	5898
32175	7590	09/08/2005	EXAMINER	
BORGWARNER INC. 3850 HAMLIN ROAD AUBURN HILLS, MI 48326			CHARLES, MARCUS	
			ART UNIT	PAPER NUMBER
			3682	
DATE MAILED: 09/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,017

Applicant(s)

KOTERA, TETSUJI

Examiner

Marcus Charles

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09-11-2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3682

### **DETAILED ACTION**

This is the first action relating to serial application number 10/660,017 filed 09-11-2003.

Claims 1-10 are currently pending.

#### ***Drawings***

1. The drawings are objected to because in figs 1, 2 and 5, the reference numeral 31 depicts two different pins. It should be noted that one pin is a shorter pin and the other is longer. Therefore, each pin should be reference with a different numeral. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

2. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not clearly explain as to how one skill in the art would have one circular surface on the addendum and one circular surface on the dedendum and at the same instant having a linear portion on the dedendum of a circular arc and in claim 10, in addition to the two circular arcs of claim 1, the specification does not provide any details as to further include first and second linear portions on the addendum and the dedendum such that a circular arc connects the two lines. It would not be obvious for one of ordinary skill in the art at the tie of the invention to disclose these limitations in combination with that of claim 1.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 8-9 are unclear and confusing because claim

Art Unit: 3682

1, discloses the inside flank has two circular arc portions, one on the dedendum and the other on the addendum sides and claim 8 disclose a linear portion on the addendum side of a circular portion on the dedendum and in claim 9 a circular arc connecting a first linear portion of the addendum and a second linear portion of the dedendum. Therefore it is unclear as to what happens to the second circular arc.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie et al. (6,533,691). Horie et al. discloses a silent chain comprising a plurality of interlaced link plates (10, 20, 30, 40), each plated inherently has a pitch, a pair of teeth (10a, 20a, 30a, 40a) having an inside flank (11) and outside flank (12); the inside flanks of each tooth comprising a first circular arc with a radius ( $R_b$ ) on the dedendum and a second circular arc ( $R_c$ ) on the addendum such that ( $R_b \geq R_c$ ). Horie et al. does not disclose that  $R_c \geq R_b$ . It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ranges such that  $R_c \geq R_b$ , since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In addition, Horie et al. fails to disclose the first curved radius ( $R_c \geq 2 \cdot P$ ),

Art Unit: 3682

$R_c \geq 20 \cdot P$ ) and  $R_c \geq 20 \cdot R_b$ ), where  $P$  is the pitch of the link, and  $P_1 \geq P_2$ ,  $P'_1 \geq P'_2$  as disclosed. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the links of Horie et al. so that ( $R_c \geq 2 \cdot P$ ), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

In claims 4 and 6, it is apparent that when the chain is pulled straight the second link plate and third link plate will overlap the teeth of the first link plate and it is apparent that the first plate will be stationary between the adjacent sprocket teeth when the chain is wrapped around the sprocket.


### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Levdivina et al. (4,832,668 and 4,509,323), Kanehira et al. (6,159,122), Avramidis et al. (5,453,059 and 4,915,675), Maruyama et al. (5,267,910) disclose a silent chain having a curved inside flank.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Marcus Charles  
Primary Examiner  
Art Unit 3682  
September 06, 2005